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NEW HOUSE DESIGNS FOR WALL-PANEL CONSTRUCTION

A CONTINUATION OF A STUDY
ON WALL PANELIZATION

ISSUED BY THE SMALL HOMES COUNCIL



UNIVERSITY OF ILLINOIS · URBANA, ILLINOIS

NEW HOUSE DESIGNS FOR WALL-PANEL CONSTRUCTION

DESIGNS FOR 1-STORY, SPLIT-LEVEL AND 2-STORY
HOUSES DEVELOPED BY THE SMALL HOMES COUNCIL,
UNIVERSITY OF ILLINOIS, URBANA, ILLINOIS, AS
CONTINUATION OF A RESEARCH PROJECT SPONSORED
BY THE LUMBER DEALERS RESEARCH COUNCIL.

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INTRODUCTION

A system of panelizing exterior walls for one-story houses, designed on the modular principle, was developed in 1953 as part of a research project sponsored by the Lumber Dealers Research Council.* This project was continued in 1954 to show how the panels can be used in split-level and 2-story houses.

The study was carried out under the direction of Rudard A. Jones, A.I.A., assistant director of the Small Homes Council, and James T. Lendrum, A.I.A., director.

Credit is due Laurence S. Higgins, John L. Schmidt, Howard E. McCall, Samuel M. Mills, Harry D. Newman, Donald R. Robertson, Arthur M. Sestak, Ronald M. Strandjord and Baron V. Whateley for design and drafting; and John J. Sorbie, architectural renderings.

Special acknowledgment is made to members of the Lumber Dealers Research Council for their support of the project.

*"Homes From Pre-Assembled Wall Panels," University of Illinois, Small Homes Council, Urbana, Illinois, \$1.00.



WP 6-3

FLOOR PLAN



HOUSE PLAN

WP 6-3

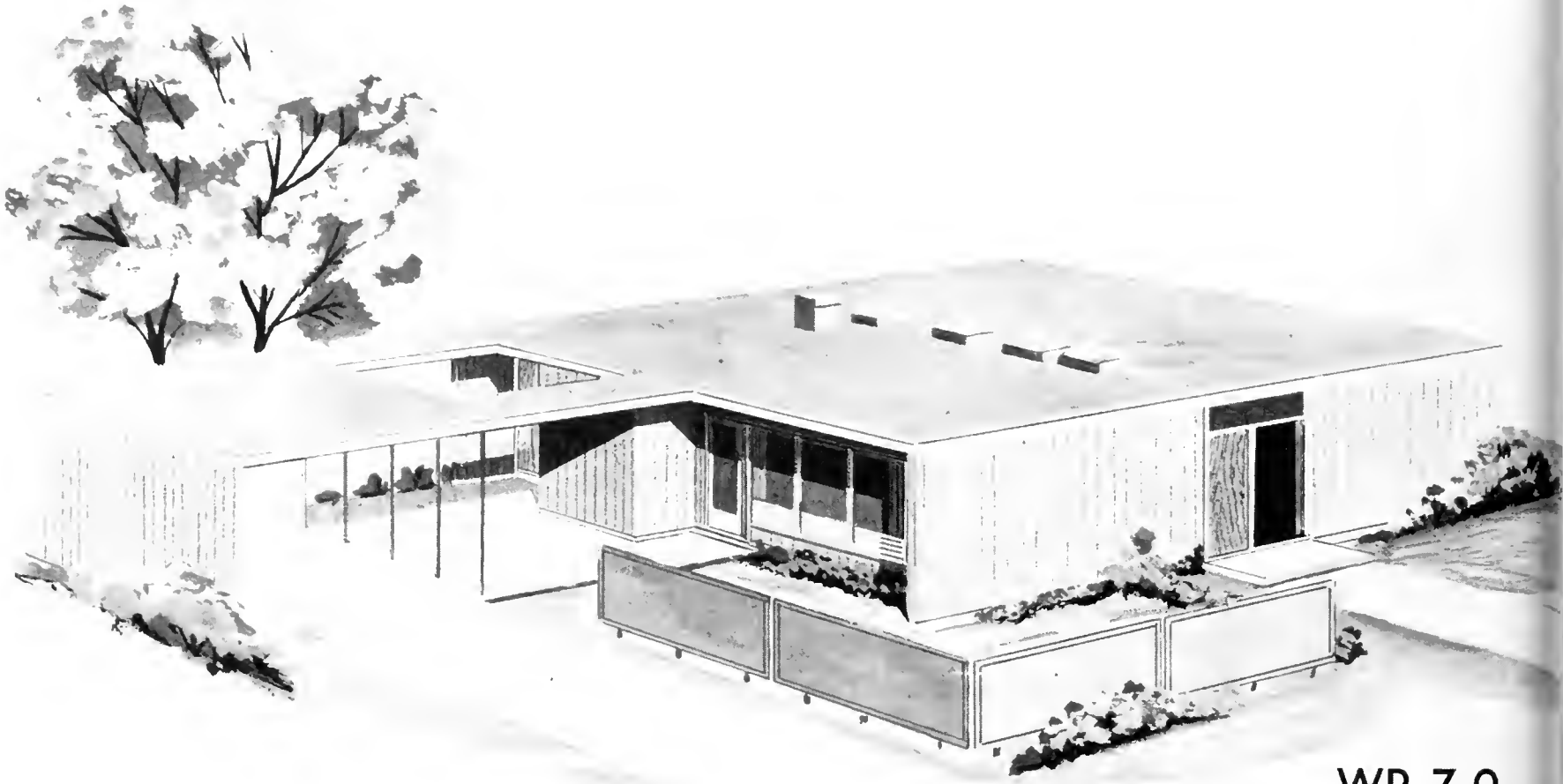
Focal point of interest in this house is the multi-purpose area conveniently placed between the living-dining room and the bedroom wing. This area provides space for eating, sewing, playing and family living. The multi-purpose area opens onto the rear terrace as does the living-dining room and is easily accessible from the front entry. A low furniture divider screens the entry from the living-dining area.

The house has three bedrooms and 1-1/2 bathrooms.

The plan shown is for a house having no basement, but it can be adapted for use with a basement by placing a stairway in the space now designated for storage.

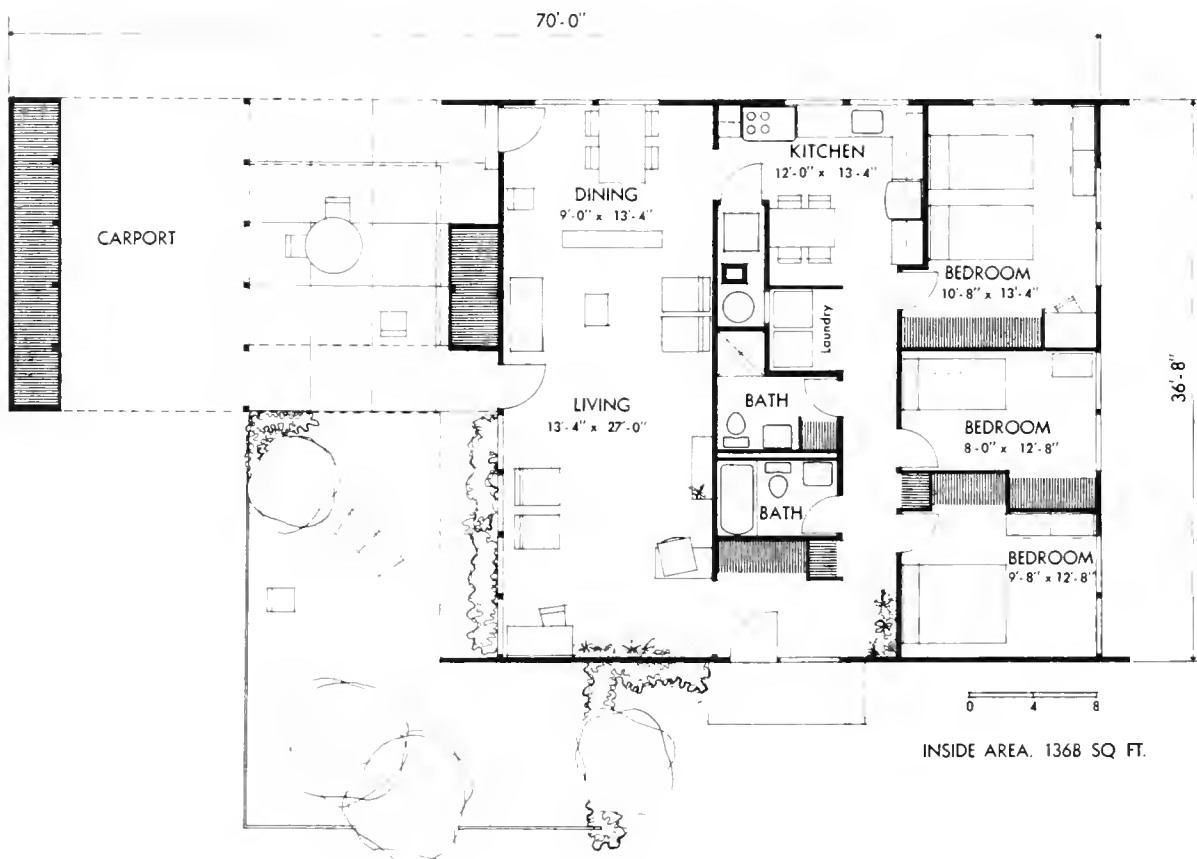
The plan can be made larger by increasing the span of each of the wings from 20 to 24 feet.

Variations in the exterior appearance of the house can be obtained by changing the slope of the roof, the placement of some of the windows, and the location of the carport. The carport, shown as attached to the living room, can be placed at the end of the bedroom wing or joined to the multi-purpose room by means of a breezeway. The house can be placed in several positions on a lot.



WP 7-0

FLOOR PLAN



HOUSE PLAN

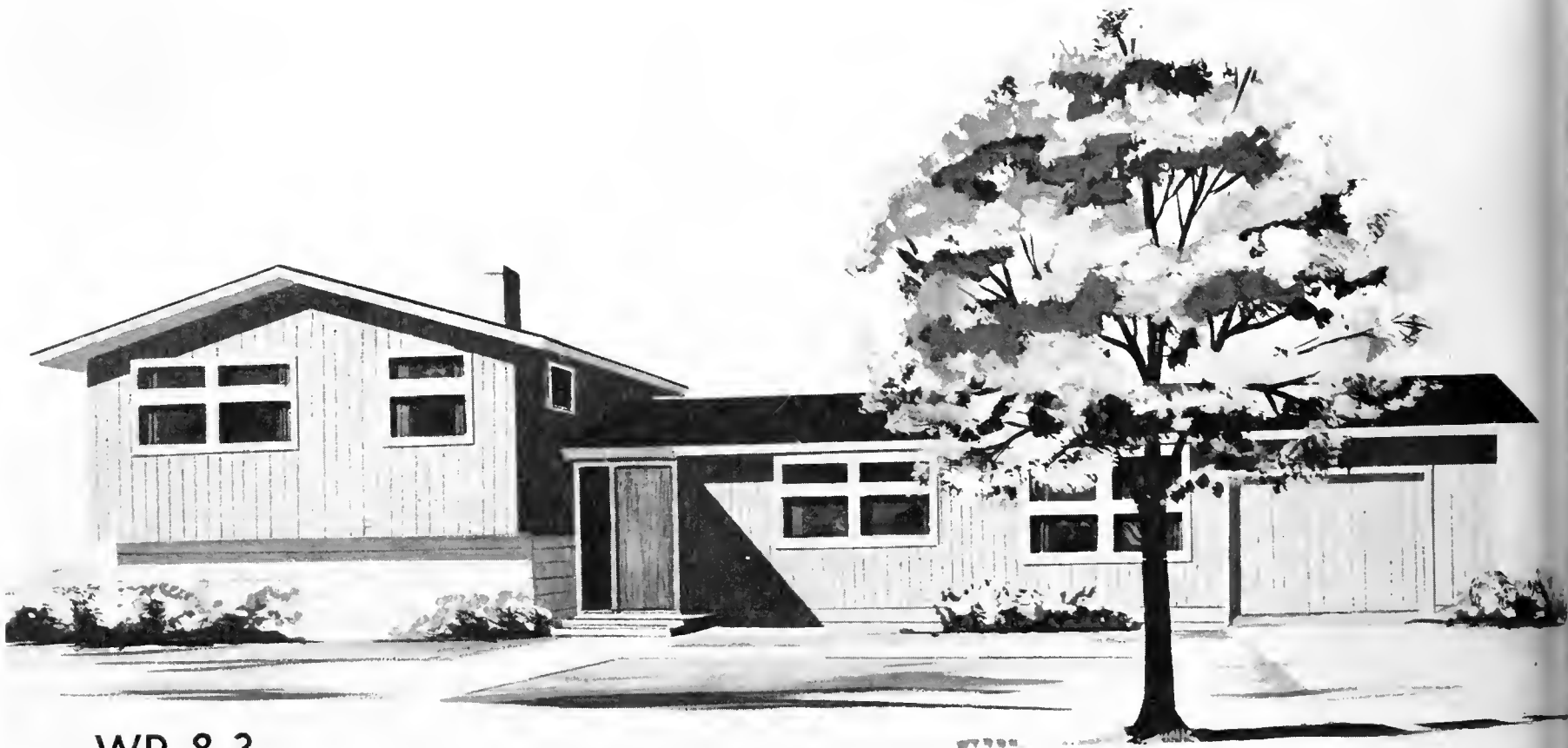
WP 7-0

A utility core and hall serve as a buffer space between the bedrooms and the living area of this house. The utility core includes space for heating equipment, two full bathrooms and the laundry. Placement of the laundry adjacent to the bedroom-bathroom area is for convenience since most of the clothes to be laundered come from this area.

The living-dining area is exceptionally large, being 13'-4" x 36'-0". Two doors open onto a partially-covered terrace which is adjacent to the carport.

The house can be adapted for basement construction by installing a basement stairway in the space occupied by the heating equipment and by changing the location of the chimney.

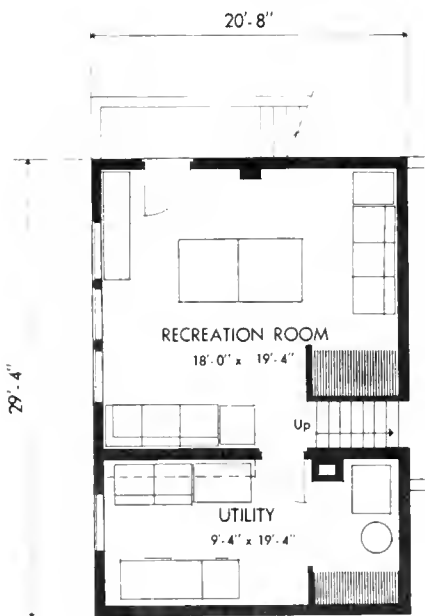
The house is shown with a flat roof, and fixed-glass windows with ventilating louvers. A low, sloping roof and other types of windows can be used. The location of the carport can be changed to the front of the lot, thus making it possible to build the house on a much narrower lot. The house plan can also be turned on the lot so that the main entrance is at the side.



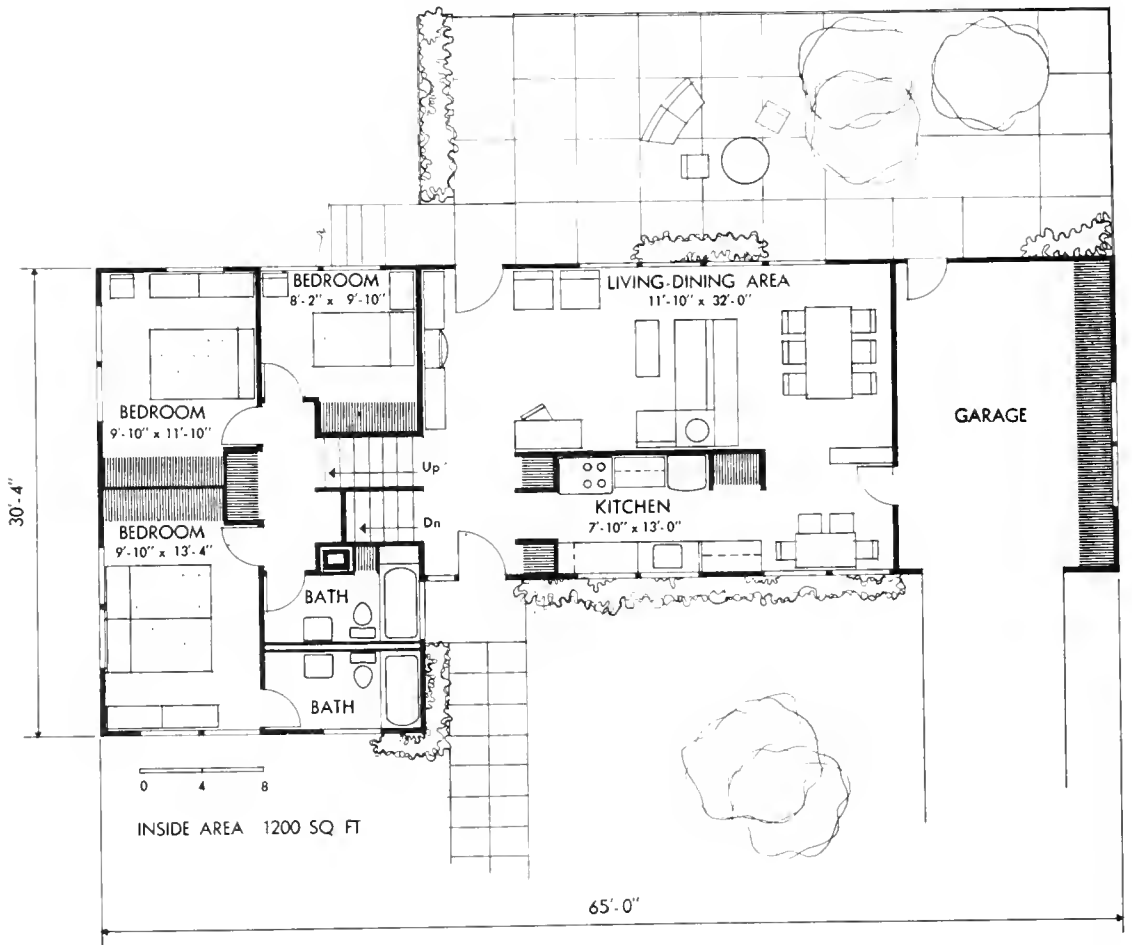
WP 8-3

INTERMEDIATE AND UPPER LEVELS

LOWER LEVEL



0 4 8
INSIDE AREA 554 SQ FT



INSIDE AREA 1200 SQ FT

HOUSE PLAN

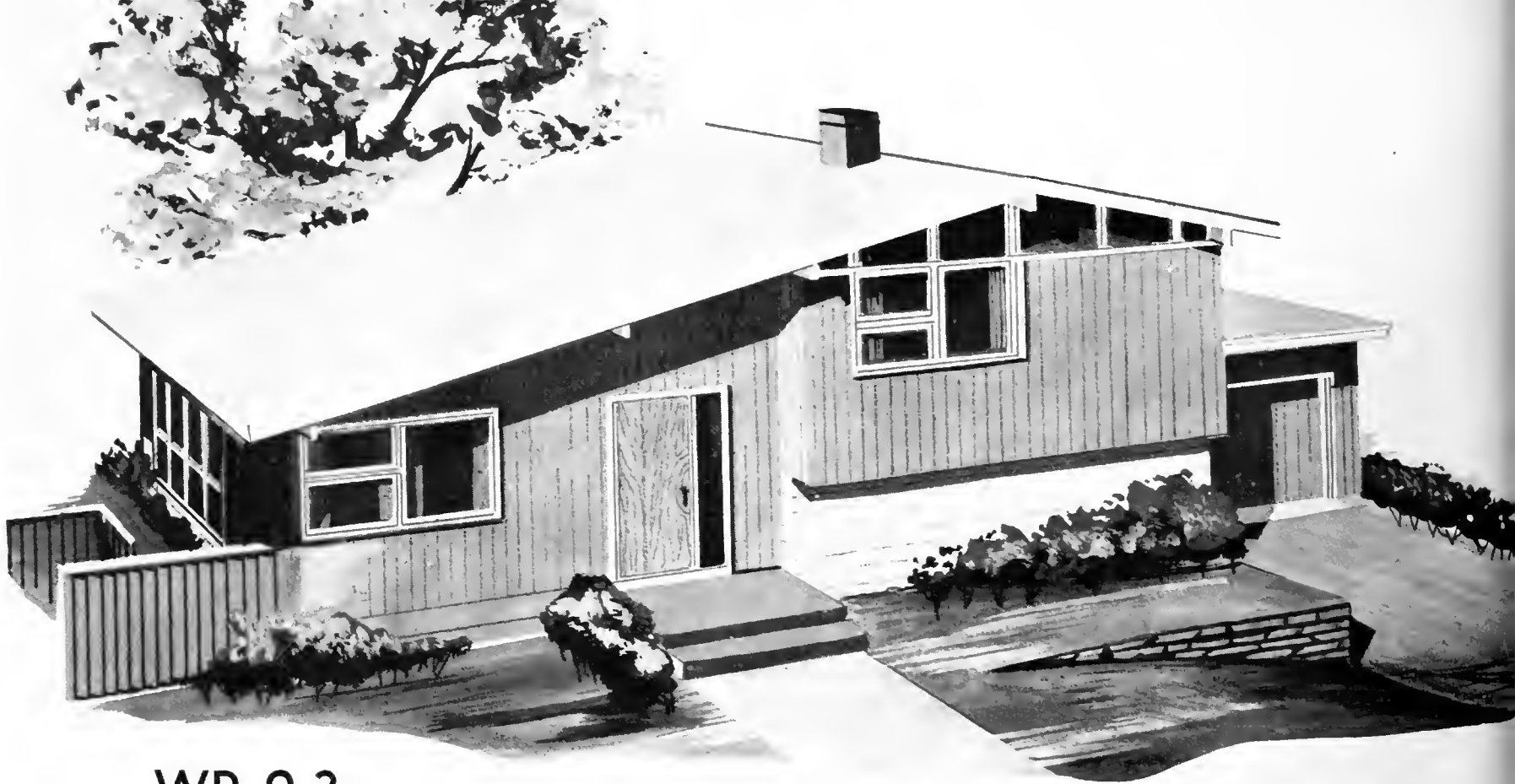
WP 8-3

Wall panels can be used in the construction of split-level houses. The panels are erected in the standard way on the platform floors of both the intermediate and upper levels.

This house plan, which has the main entrance on the intermediate level, illustrates the advantages of split-level houses. The sleeping area is on the upper level, thus offering privacy from the street and from the rest of the house; the living-dining area and kitchen are on the intermediate level, easily accessible to the outdoor living areas; the utility and recreational areas are on the lower level. Since the floor of the lower level is only two feet below grade, it has excellent daylight and offers improved livability over conventional basements. Each level is separated from the next by not more than eight steps. The entrance is so placed that there is easy access to all levels.

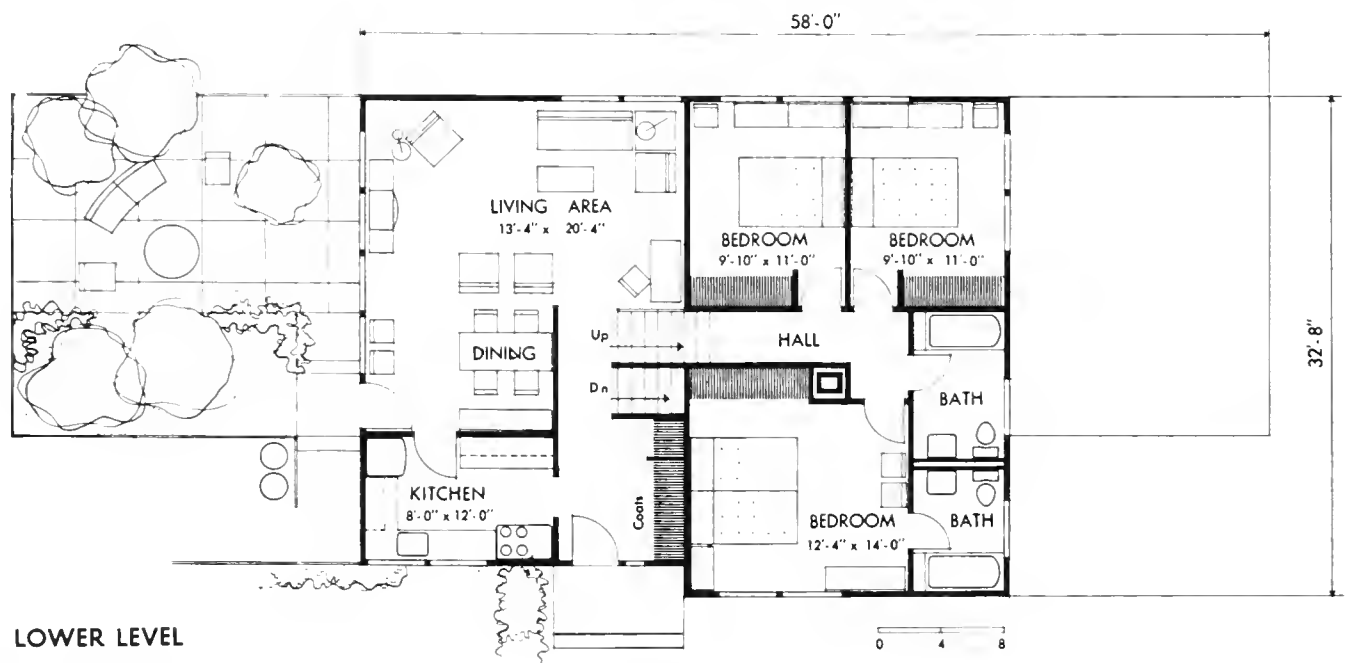
Other features of this three-bedroom house are two bathrooms and a breakfast room.

The house can be located on a level lot as shown, or on a lot which slopes slightly to one side. In the latter case, the two-story section of the house would be on the downward slope. For narrow lots, the house can be positioned so the garage is to the street. The garage can also be placed at one end of the two-story section, and roofs of different slopes can be used.



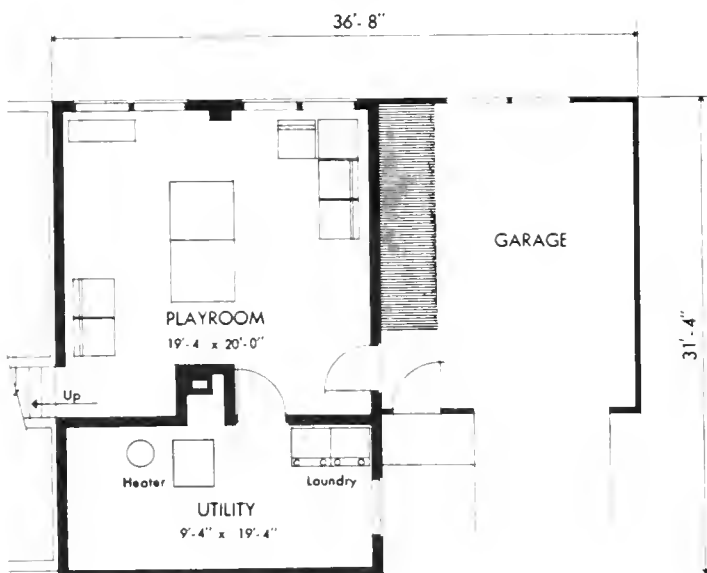
WP 9-3

INTERMEDIATE AND UPPER LEVELS



LOWER LEVEL

INSIDE AREA. 1250 SQ FT



INSIDE AREA 580 SQ FT

HOUSE PLAN

WP 9-3

This split-level house has an extremely compact design. On the intermediate level are located the kitchen, living area, dining alcove, and entrance hall. The entrance hall has stairs to the sleeping area on the upper level and to the utility and recreational areas on the lower level. The garage is connected with the lower level. There is a large outdoor terrace adjacent to the living-dining area. The house has three double bedrooms, including a large master bedroom which has its own bathroom.

Rafters are used in the roof construction with the ceiling line following their slope. This gives a feeling of openness to the living-dining areas and the bedrooms. The plans can be modified to allow the use of roof trusses on the upper level.

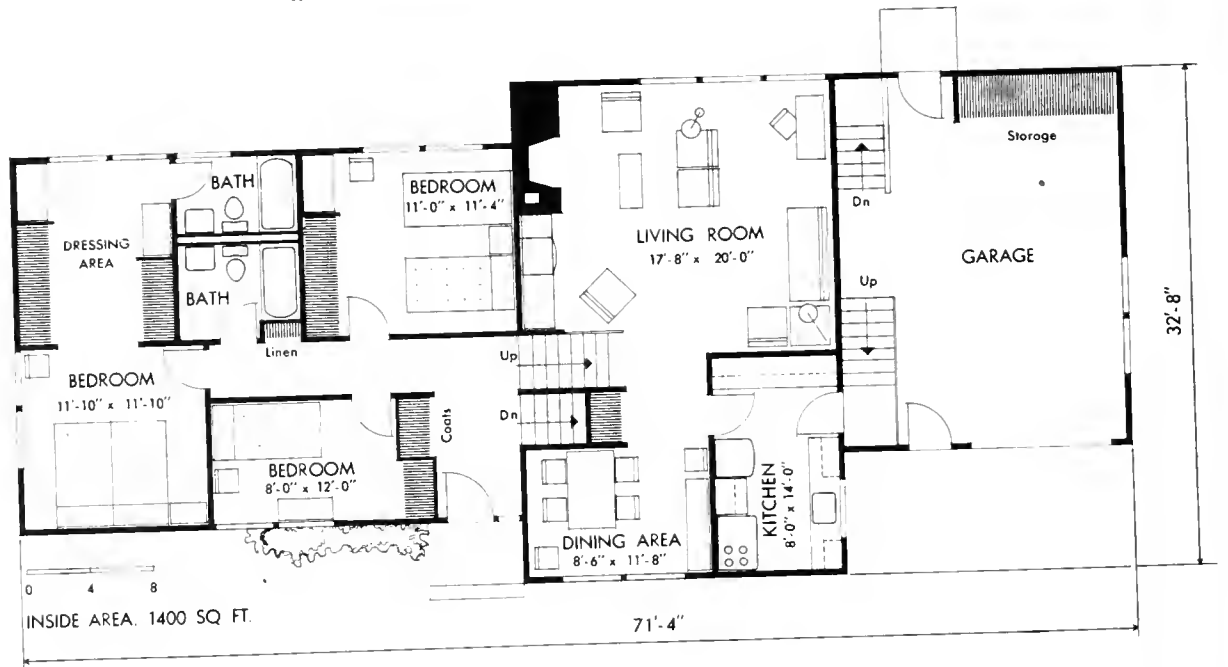
The house is shown on a lot which slopes slightly to one side. It can be placed on a level lot by raising the garage.

To conserve space, the garage can be set in front of the two-story section of the house. For narrow lots, the plan can be rotated so that the main entrance is at the side.

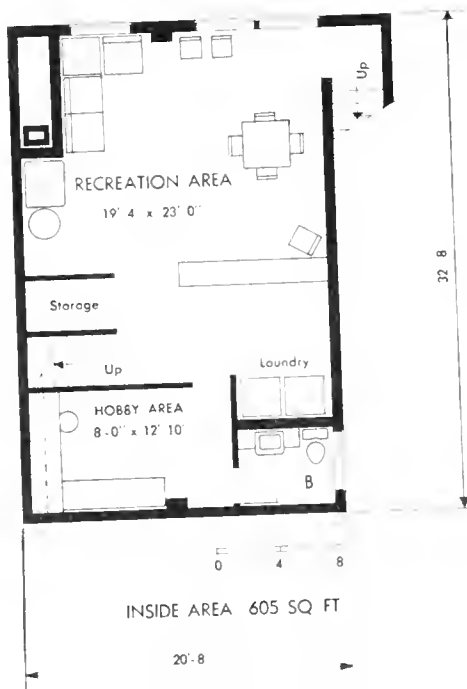


WP 10-3

INTERMEDIATE AND UPPER LEVELS



LOWER LEVEL



HOUSE PLAN

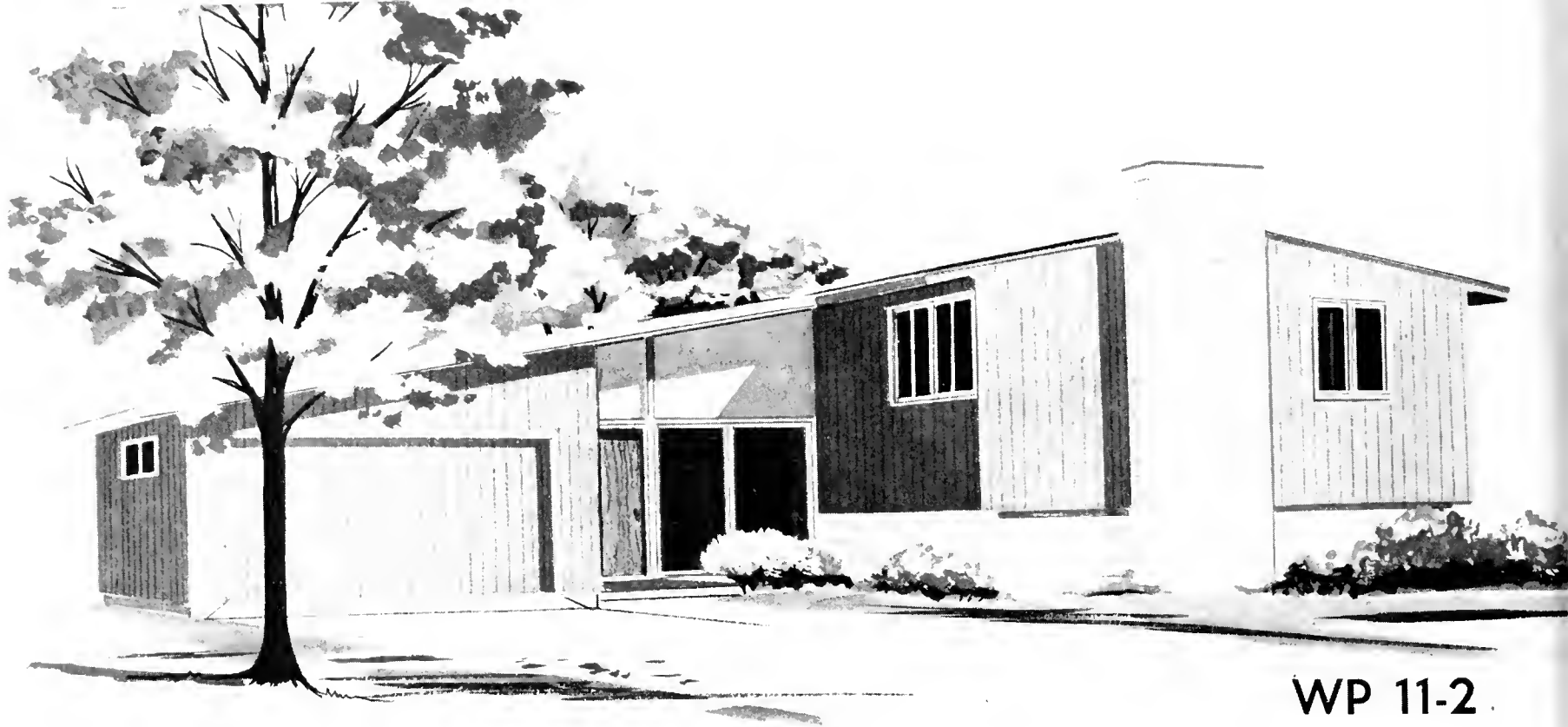
WP 10-3

Intended for a level lot, this split-level house of unusual plan arrangement lends itself well to enjoyment of a view since the living area is raised.

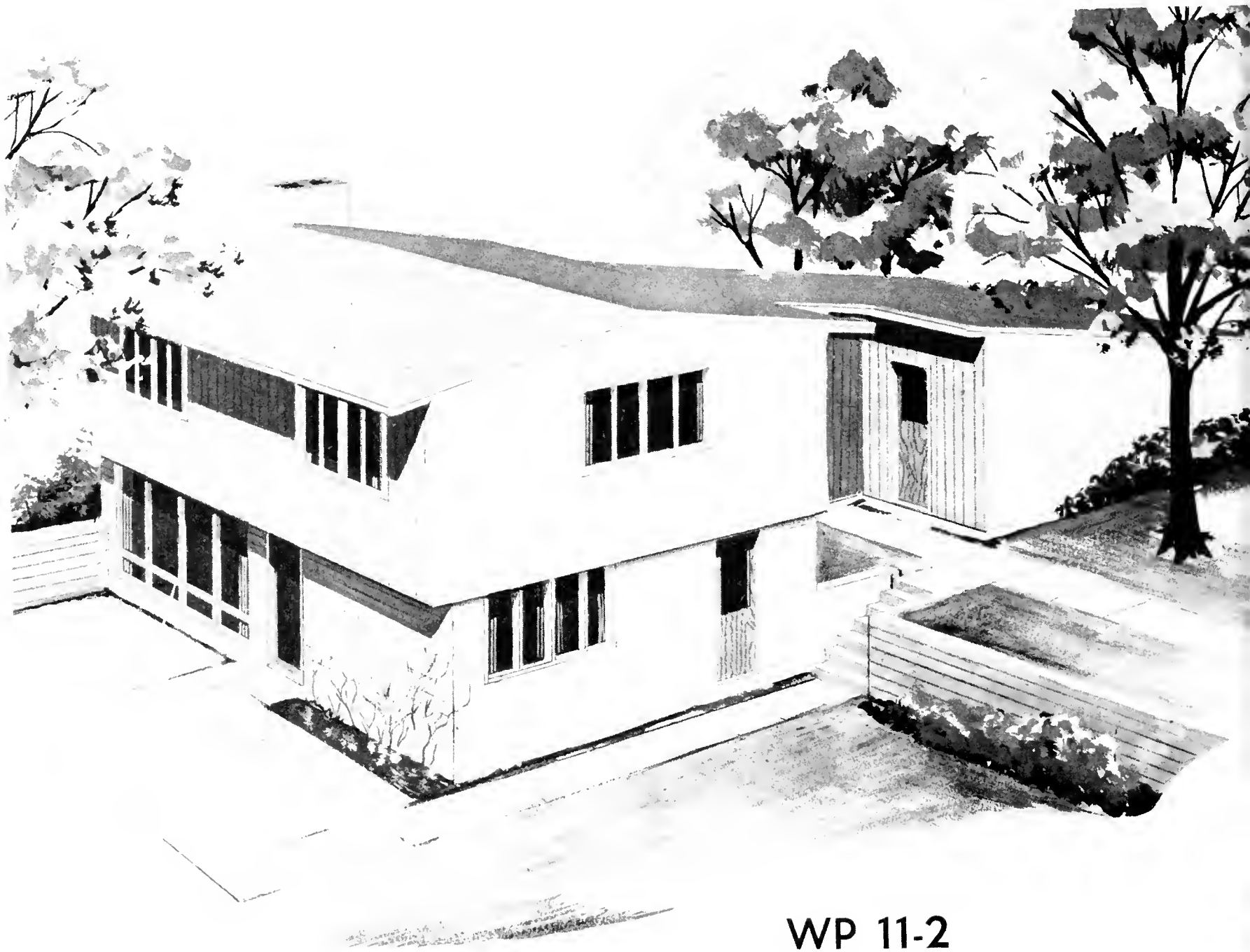
The living-dining area and the kitchen are on the upper level; the sleeping area on the intermediate; and recreational and utility areas on the lower level. The garage is attached to the house at the intermediate level but is easily accessible from both the recreation room and the kitchen by half-flights of stairs.

Special features of the house are a fireplace, a large dressing area in the master bedroom which has its own bathroom, and space for hobby equipment in the lower level.

The roof shown is a truss construction with a slope of 3 inches in 12. Trusses of other slopes can also be used.

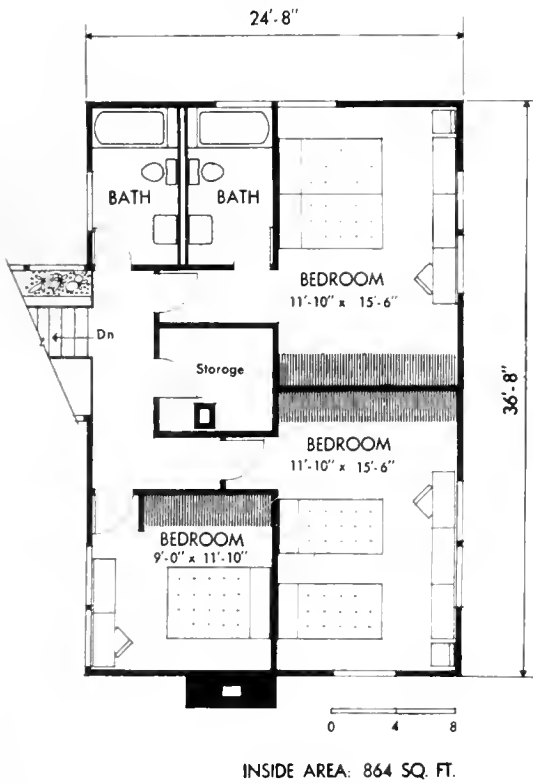


WP 11-2



WP 11-2

UPPER LEVEL



HOUSE PLAN

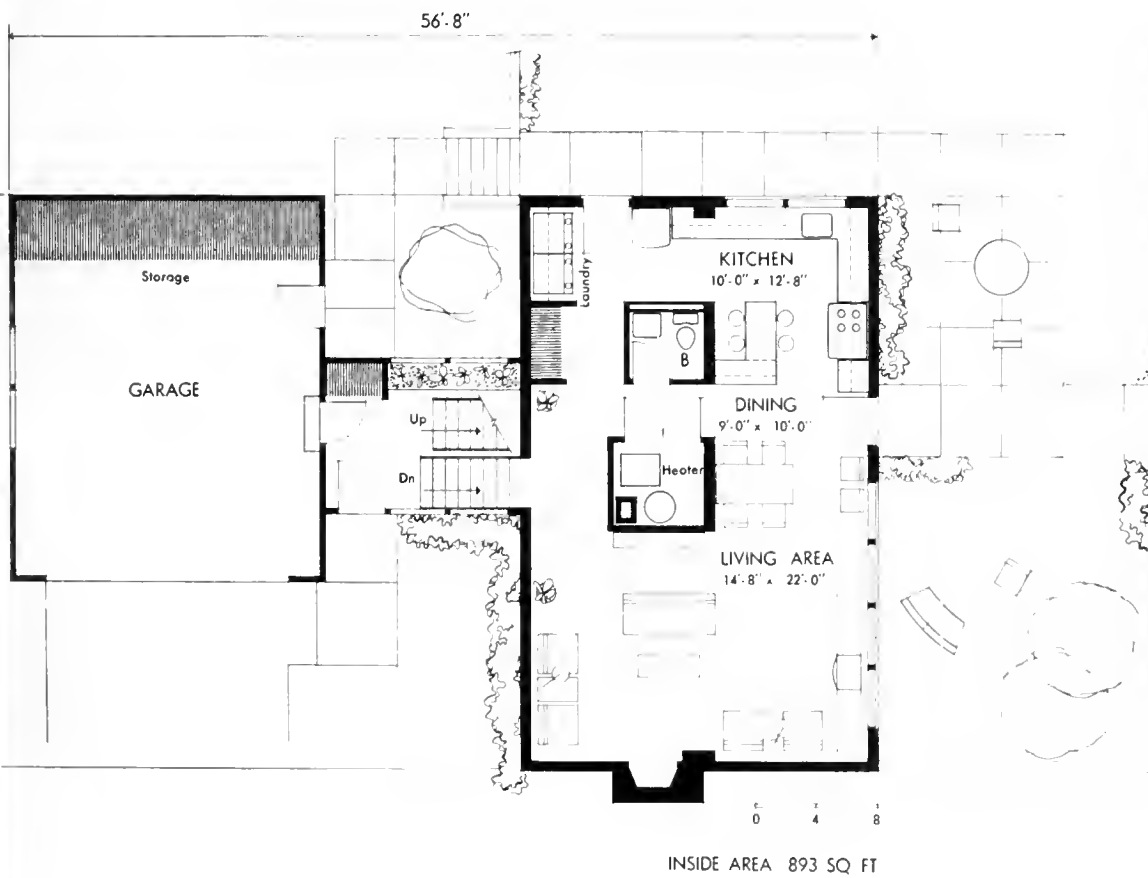
WP 11-2

In this two-story house designed for a sloping lot, the walls of the lower level are of masonry. Wall panels are used for the upper level.

Entrance to the house is at the ground level. It can be entered from the garage or the street. In the entrance, there are seven steps leading to the sleeping area on the upper level and eight steps going down to the living-dining-kitchen area. The entrance, which lies outside the basic rectangle of the house proper, occupies 118 sq. ft.

The plan for the lower level is a relatively open one with the living, dining and kitchen areas separated only by furniture. The living-dining area has one wall that is largely glass. This area opens out onto a paved terrace.

INTERMEDIATE AND LOWER LEVELS



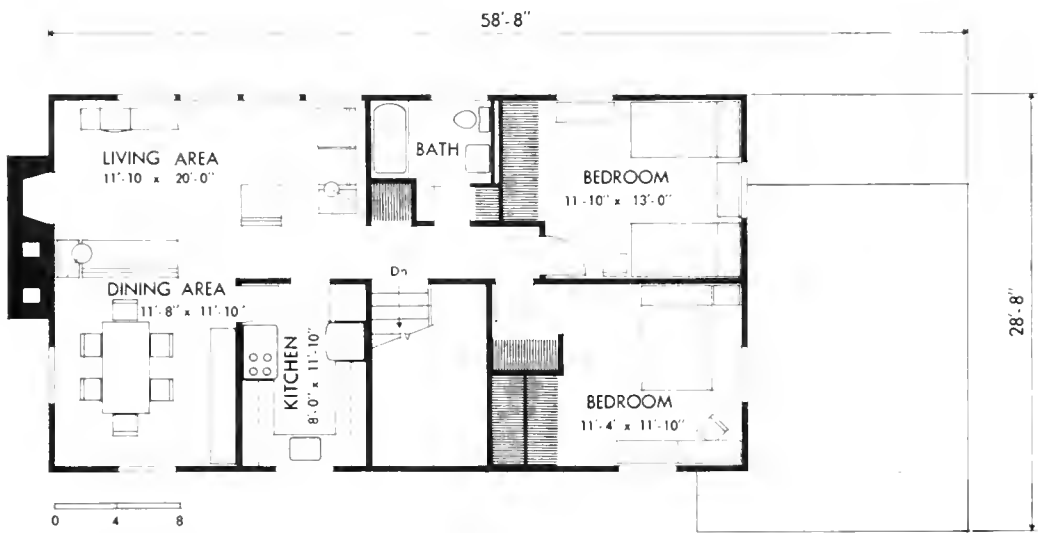
All the three bedrooms in the upper level are large and have good storage facilities. One of the two bathrooms is reserved as a private bath for the master bedroom.

The house is intended for a lot which slopes to one side. It can also be used for a level lot if an area is excavated for the living-room terrace. By rotating the plan 90°, it can also be used on a lot which slopes to the rear rather than the side.



WP 12-3

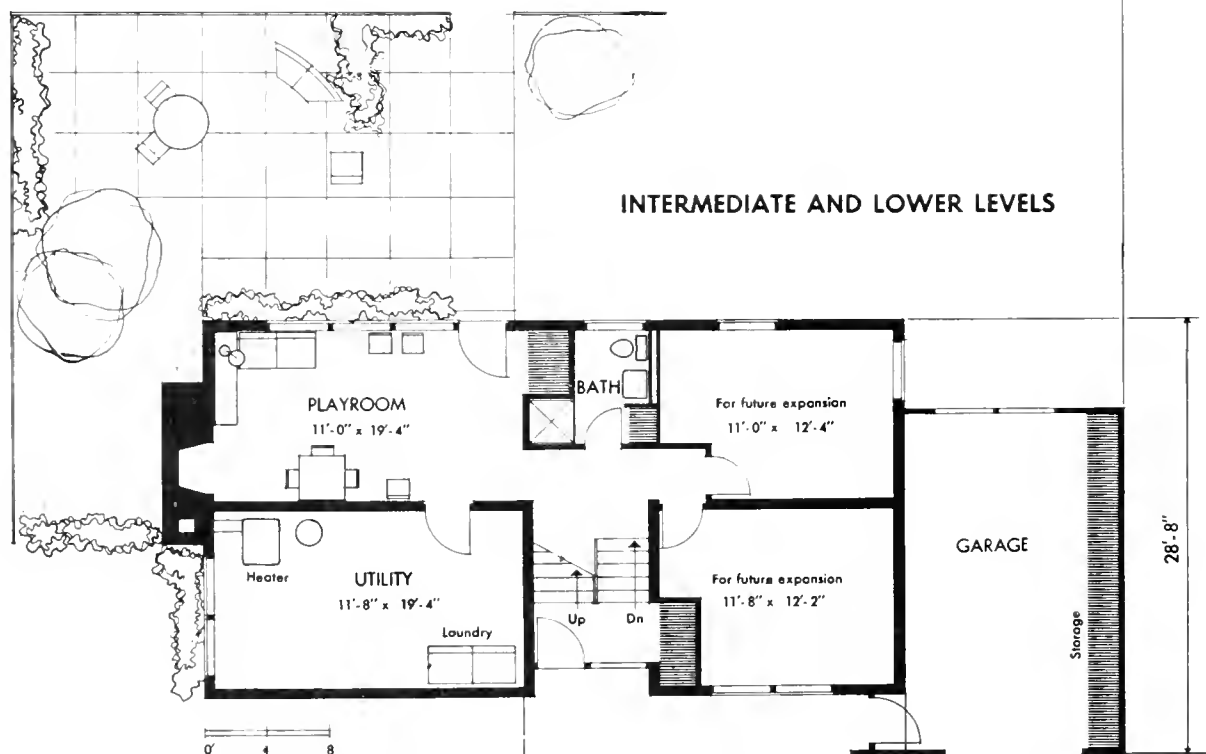
UPPER LEVEL



INSIDE AREA 1056 SQ. FT.

58'-8"

INTERMEDIATE AND LOWER LEVELS



INSIDE AREA 1028 SQ. FT.

HOUSE PLAN

WP 12-3

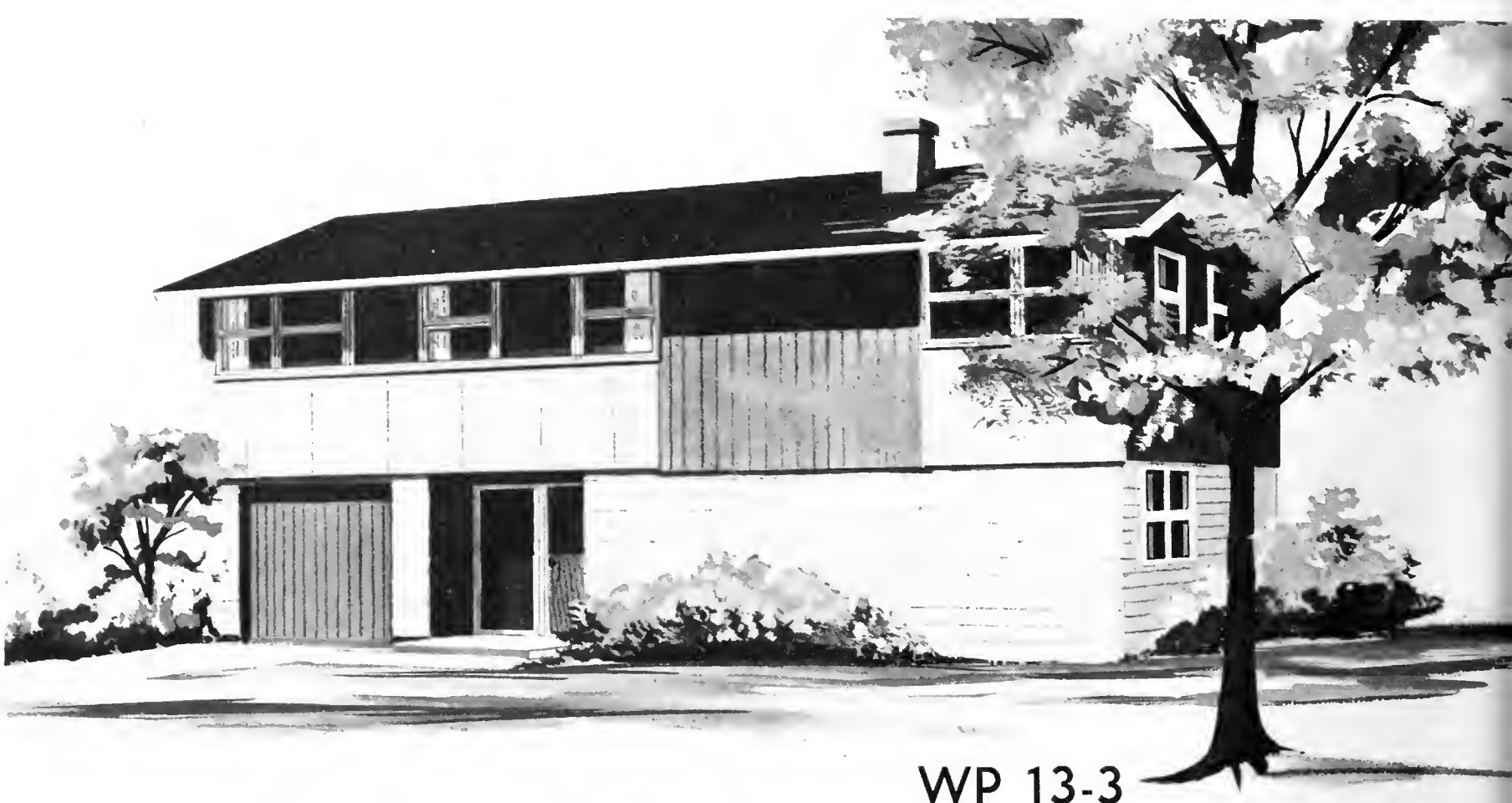
This two-level house with entrance at the intermediate level is designed for future expansion at the lower level.

The upper level, as shown, provides a living area with fireplace, a large dining area, and a kitchen, all at one side of the center entrance. At the other side of the entrance are two bedrooms and a bath.

The lower level has a bath with shower, a large utility area which can also serve as a hobby room, and a separate playroom which opens onto a terrace at the rear of the house. Two additional rooms can be finished at a later date.

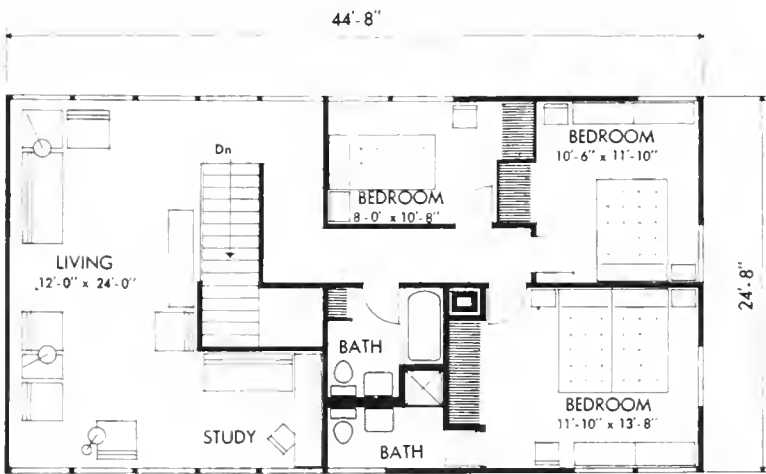
The house is designed for a lot which slopes to the rear but can be adapted to a level lot by reducing the height of the windows in the playroom.

The garage can be placed in front of the house if desired. The plan can be rotated 90° so that the house will fit on a narrow lot.



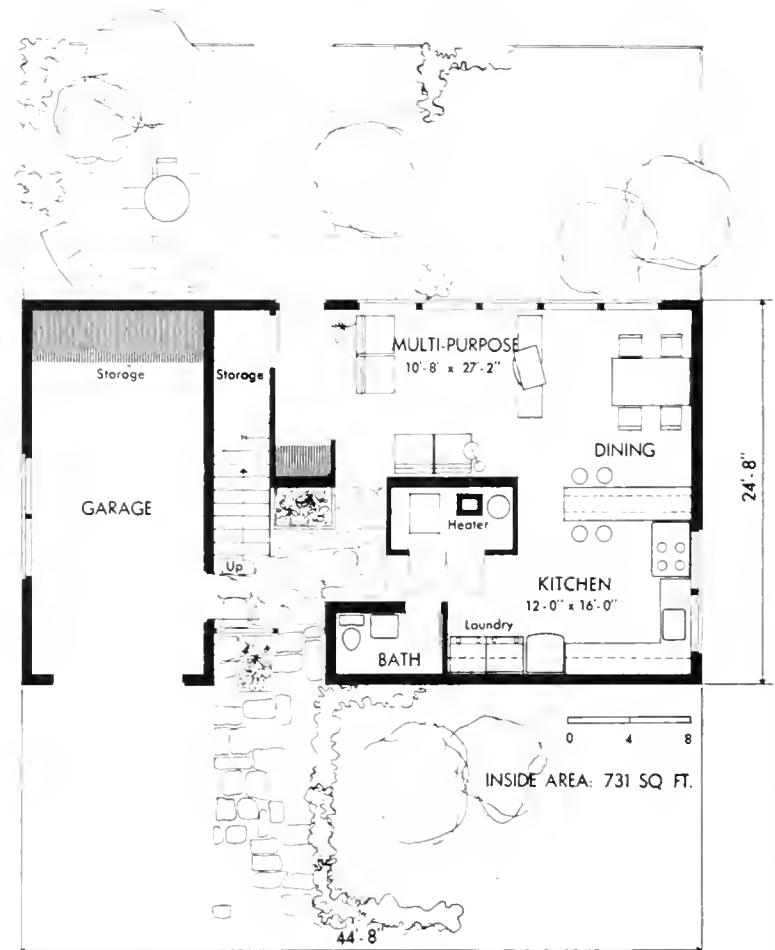
WP 13-3

UPPER LEVEL



INSIDE AREA: 1056 SQ. FT

LOWER LEVEL



HOUSE PLAN

WP 13-3

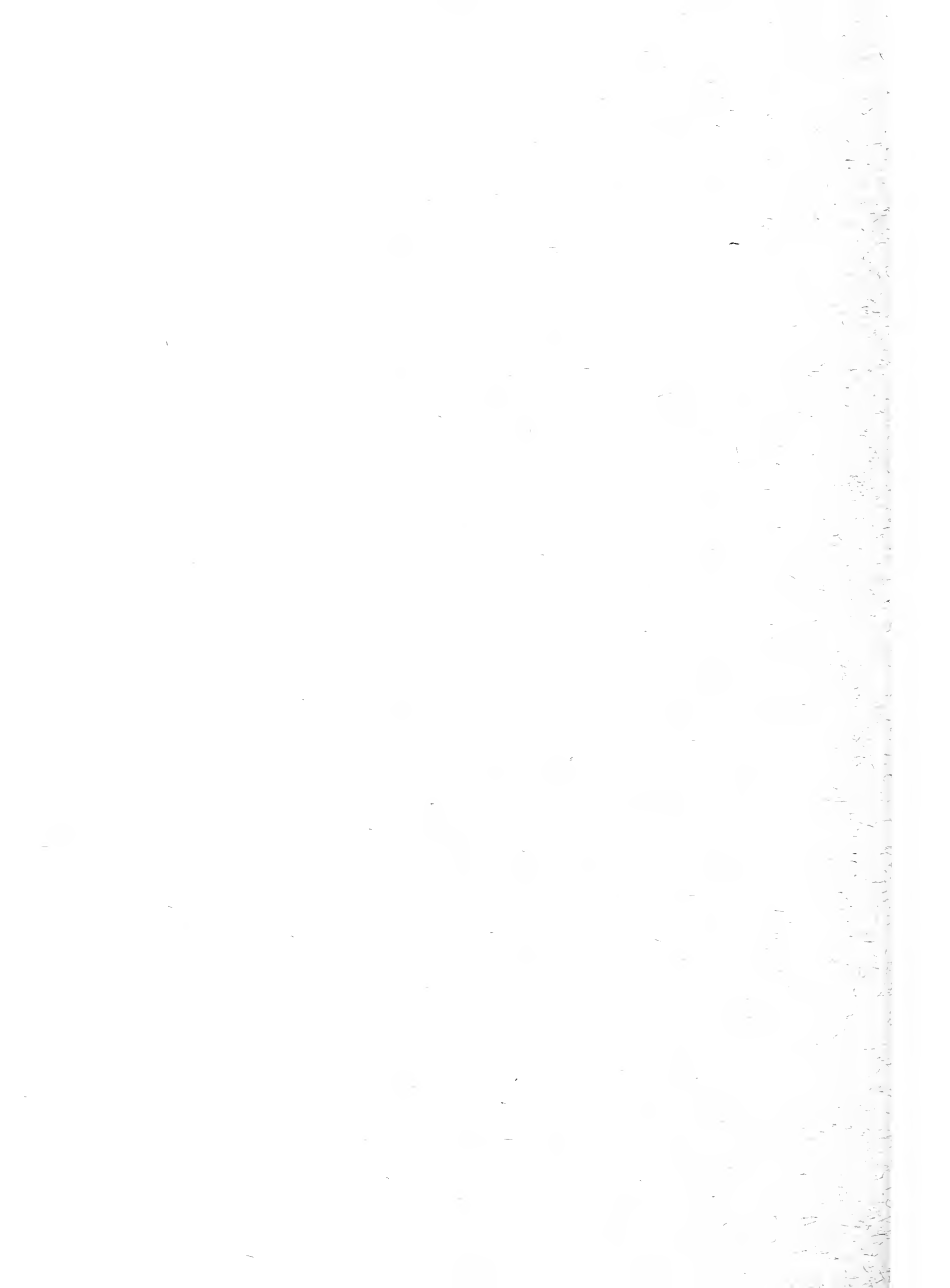
This two-story basementless house is ideal for families with small children or teen-agers. It provides for daytime family activities on the ground-floor level, while the upper level has a formal living area in addition to the bedrooms.

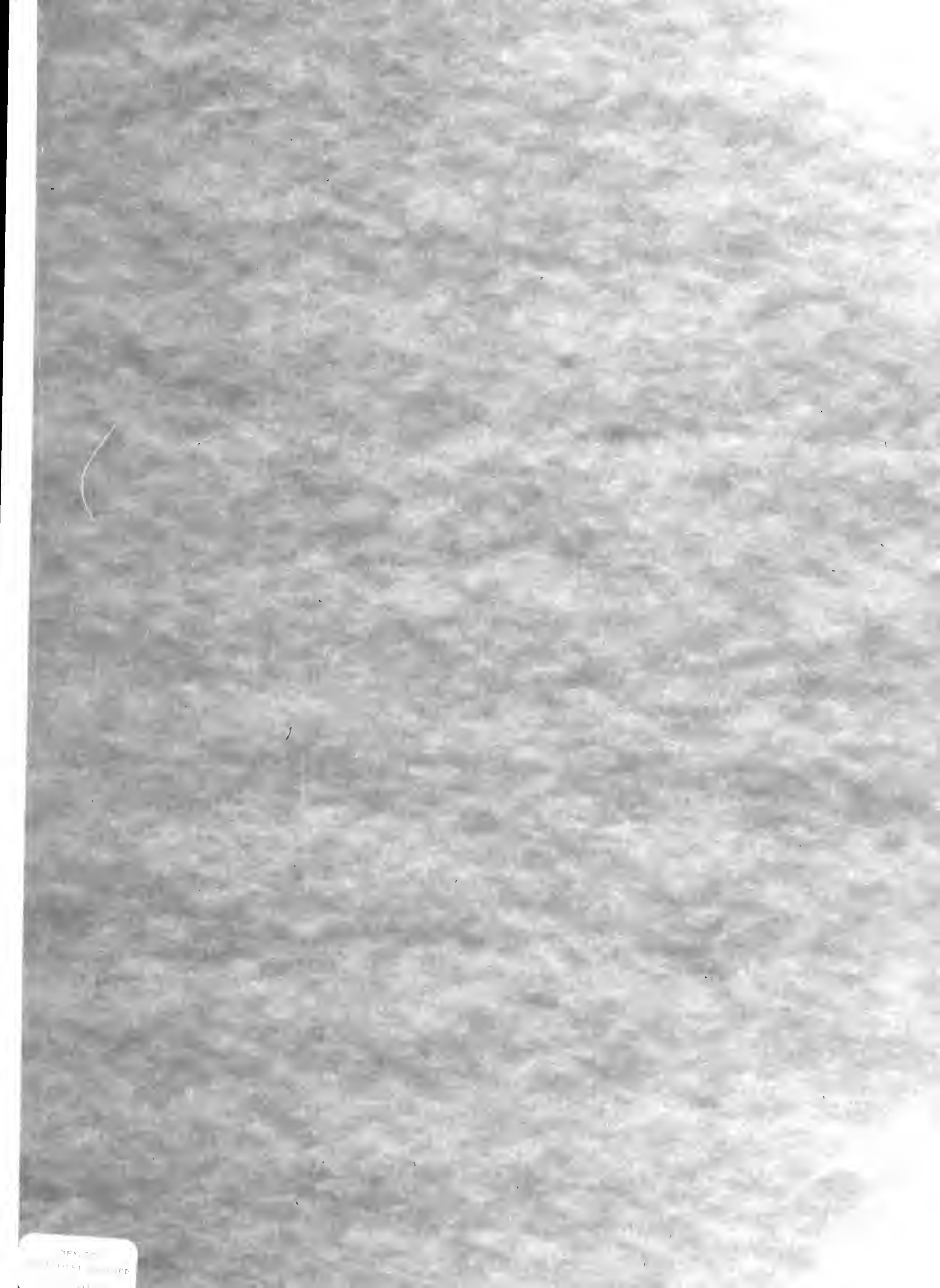
The ground floor contains space for the garage, the entryway, a half-bath, laundry, kitchen, dining area, and multi-purpose or play room. The latter is designed for easy supervision from the kitchen, as is the large outdoor living terrace onto which the multi-purpose room opens. Storage areas are located in the garage and under the stairway.

The formal living room on the second floor has a small alcove which can be used as a television viewing area or as a study. There are three bedrooms and two bathrooms, one of which is assigned to the master bedroom.

Panel construction is used for the second-floor exterior walls. After the platform floor of the second level is built over the first-floor masonry walls, panels can be erected in the standard way.

The house is shown with a roof of truss construction, sloping 3 inches in 12.





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New house designs for wall-panel constru



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